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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VAUGHN, GREGORY J

ART UNIT

PAPER NUMBER

2178

MAIL DATE

DELIVERY MODE

04/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/645,503		JEON ET AL.	
	Examiner		Art Unit	
	GREGORY J. VAUGHN		2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12, 14, 20, 22, 24-28, 30-36, 38-43, 45-50, 52-57, 59-64 and 66-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 14, 20, 22, 24-28, 30-36, 38-43, 45-50, 52-57, 59-64 and 66-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/19/07 and 11/7/07</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Action Background

1. This action is responsive to the amendment filed on 11/7/2007.
2. Applicant has canceled claims 13, 23, 29, 37, 44, 51, 58 and 65; amended claims 12, 20, 22, 24-28, 30-34, 36, 38, 40, 41, 43, 45, 47, 48, 50, 52-55, 57, 59, 61, 62, 64, 66, 68 and 69; and added new claims 71-78. Claims 1-11, 16-19 and 21 were previously canceled.
3. Claims 12, 14, 20, 22, 24-28, 30-36, 38-43, 45-50, 52-57, 59-64 and 66-78 are pending in the case, claims 12, 20, 22, 28, 36, 43, 50, 57 and 64 are independent claims.
4. Acknowledgement is made to the applicant's submission of two Information Disclosure Statements, filed on 9/19/2007 and 11/7/2007.
5. The examiner's objections to the specification, as recited in the office action dated 5/15/2007, are withdrawn in view of the cancellation of these amendments, as described in the remarks section of the response dated 11/7/2007.
6. The examiner's rejections of claims 12-15, 20 and 22-70, rejected under 35 USC 112, as recited in the office action dated 5/15/2007, are withdrawn in view of claim amendments.

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7. The examiner's rejections of claims 13, 23, 29, 37, 44, 51, 58 and 65, rejected under 35 USC 102(e), as described in the office action dated 5/15/2007, are withdrawn in view of the canceled claims.
8. The examiner's rejections of claims 12, 14, 20, 22, 24-28, 30-36, 38-43, 45-50, 52-57, 59-64 and 66-70, rejected under 35 USC 102(e), as described in the office action dated 5/15/2007, are withdrawn in view of the canceled claims.

Priority

9. As previously noted, acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d) to Korean applications 49966/2002 (filed 8/23/2002) and 62827/2002 (filed 10/15/2002). The certified copies of these applications have been filed in the current application.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

“a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

11. Claims 12, 14, 20, 22, 24-28, 30-36, 38-43, 45-50, 52-57, 59-64 and 66-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marsh, US Patent Publication 2003/0233241, filed 6/6/2002, published 12/18/2003 in view of Maesaka et al., US Patent Publication 2002/0045951, filed 10/4/2001, published 4/18/2002 (hereinafter Maesaka).

12. **Regarding independent claim 12**, Marsh discloses a program broadcasting system provider and a client in the program providing system in Figure 2, where the broadcast network is shown at reference sign 214, the provider is shown as the combination of elements shown at reference signs 202, 204, 206, 208 and 210, and the client is shown at reference sign 212. Marsh discloses providing an XML document that describes programming information about television programs to the client. Marsh recites: *“The schedule file is a description of the programs that are to be broadcast over a future time period for which an EPG is going to be constructed. For example, the schedule file can describe which programs are going to be*

broadcast for the next two weeks. Thus, the schedule file contains the instance description metadata as described in FIG. 1. The schedule file can be implemented as any suitable type of file. In this particular example, the schedule file is implemented as an XML file. The schedule file refers to the pieces of media content (i.e. programs) by way of their respective unique identifiers or MCIDs" (paragraph 54). Marsh discloses providing the program information document to a client in Figure 4, at reference sign 412, shown as "Transmit the content folder to multiple client devices".

Marsh discloses the electronic document as an XML file, as described above. Marsh discloses a hierarchical structure for program data. Marsh discloses a database of program guide information in Figure 2 at reference sign 216, shown as EPG database (EPG stands for "*Electronic Program Guide*"). Marsh discloses the database storing information in a hierarchical manner. Marsh recites: "*Client system 502 can include a local electronic programming guide (EPG) database 600 that stores content folders that can include content files, support files and content description files associated with the content files that are downloaded from a server. An exemplary content description file is described in the section entitled "Content Description File" below*" (paragraph 65). Marsh describes an XML file providing hierarchical information, as described above. Marsh fails to describe the XML file as having an upper fragment and a plurality of lower fragments. However, it is well known that XML files are well suited to provide hierarchical data, where child data elements are nested below parent data elements, within the structure of the XML

file. Marsh discloses, in Figure 1, data that is hierarchically structured, where the “*Program Data*” is the parent of the “*Content Description Metadata*” and the “*Instance Description Metadata*”; and the “*Content Description Metadata*” is the parent of the “*Story Line*”, “*Director*”, “*Actors*” etc. data. Marsh discloses these files as XML files. Marsh recites: “*the content folder comprising an XML content description file that describes the particular piece of media content*” (claim 45). See also the XML code fragments after paragraphs 84, 95 and 108, where hierarchical examples of XML are presented.

Marsh discloses the XML document providing program information for each scheduled television broadcast. Marsh discloses a program identifier. Marsh recites: “*the content description metadata and the instance description metadata are linked via a media content identifier number 106 or “MCID”. An MCID is a unique number that is assigned to the piece of media content to identify it*” (paragraph 27). Marsh discloses the use of the program title, broadcast information and content information. Marsh recites: “*The program data stored by the EPG database, also termed “EPG data”, can include content description metadata 102 and instance description metadata 104. For example, the EPG database 216 can store program titles, ratings, characters, descriptions, actor names, station identifiers, channel identifiers, schedule information, and the like*” (paragraph 32).

Marsh discloses updating the electronic program guide. Marsh recites: “*The MCID can provide a basis by which the particular media content can be easily and readily identified. Once identified, metadata associated with the media content can*

be easily updated and extended. MCIDs can also be used to generate electronic programming guides for the users" (paragraph 27). Marsh's invention is directed toward a personalized EPG, where the user can modify and update the EPG. Marsh discloses an updated EPG, but fails to disclose updating a portion of an existing XML document based upon an invalid element indicator. Maesaka discloses updating a portion of an XML document based upon an invalid element indicator.

Maesaka is directed toward updating XML documents, where updating includes a plurality of update instructions (paragraph 12). Maesaka discloses in Figure 3 an "Update Form", where the "Path" and "Method" data are used to identify an invalid element, which is replaced by the data in the "Value" box. See also Figure 6, where the "Remove" update method is shown. As shown in Figure 6, the "Remove" method will either delete an element (reference sign C5), or change the value of an element (reference sign C4). Although Maesaka is directed toward updating from a client machine to a server, it would have been obvious to provide updating from the server to the client.

Therefore, it would have been obvious, to one of ordinary skill in the art at the time the invention was made to combine the XML based electronic program guide of Marsh with the XML updating as taught by Maesaka in order to "*update the XML data rapidly by using smaller memory capacity*" (Maesaka, paragraph 9).

13. **Regarding dependent claim 14**, Marsh and Maesaka disclose deleting based upon the invalid element, as described above. The invalid element identifier, shown as the "Path" variable in the "Update Form" shown in Figure 3 of Maesaka provides

an explicit indication of the invalid content to delete. As shown in Figure 6 of Maesaka, the “*Remove*” function will delete the element at the designated path location (reference sign C5).

14. **Regarding independent claims 20 and 22**, the claim is substantially the same as claim 1 and is rejected using the same rationale. Claim 20 is further directed toward a requesting step, where the client requests an update. Marsh discloses a requesting step. Marsh recites: “*requests for program information can be sent from the EPG application to the database engine for execution. Support files such as the artwork and trailer files are not loaded into the database, but rather are read by the EPG application directly from the content folders*” (paragraph 58).
15. **Regarding dependent claims 24 and 27**, Marsh discloses an XML schema. Marsh recites: “*Advantageously, the user preference file and the content description file can conform to a common content description schema*” (paragraph 68). An XML schema is a way to define the structure, content and, to some extent, the syntax of XML documents. As was noted above, Maesaka discloses a “Path” element which defines the syntax of the hierarchical structure of the XML document.
16. **Regarding dependent claim 25**, Maesaka discloses identifying in the previously supplied electronic document the invalid content portion identified by the invalid element, as described above.
17. **Regarding dependent claim 26**, Maesaka discloses an invalid content portion that is indicated to be invalid by an invalid attribute, as described above.

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18. **Regarding independent claims 28, 36, 43, 50, 57 and 64**, the claims are substantially the same as claim 20, and are rejected using the same rationale.
19. **Regarding claims 30, 31, 38, 39, 45, 46, 52, 53, 59, 60, 66 and 67**, the claims are substantially the same as claim 24, and are rejected using the same rationale.
20. **Regarding claim 32**, the claim is substantially the same as claim 25, and is rejected using the same rationale.
21. **Regarding claims 33, 40, 47, 54, 61 and 68**, the claims are substantially the same as claim 26, and are rejected using the same rationale.
22. **Regarding claims 34, 35, 41, 42, 48, 49, 55, 56, 62, 63, 69 and 70**, the claims are substantially the same as claim 27, and are rejected using the same rationale.
23. **Regarding claims 71-78**, Marsh discloses program content information that includes review information in Figure 1 at reference sign 102. Marsh discloses, in Figure 9, the broadcast information specifying a broadcast service (shown as the channel) and a broadcast time and duration (shown in the program guide grid as a rectangle, where the left edge of the rectangle is the start time, and the size of the rectangle indicates the duration).

Response to Arguments

24. Applicant's arguments with respect to claim 12 have been considered but are moot in view of the new ground(s) of rejection, as described above.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Vaughn whose telephone number is (571)

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272-4131. The examiner can normally be reached Monday to Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached at (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Gregory J. Vaughn/
Patent Examiner
February 19, 2008

/Stephen S. Hong/

Supervisory Patent Examiner, Art Unit 2178